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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,793	03/08/2002	Toshio Kazama	AB-1217 US	9302

7590

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EXAMINER

NORRIS, JEREMY C

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,793

Applicant(s)

KAZAMA, TOSHIO

Examiner

Jeremy C. Norris

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,14 and 16 is/are rejected.
- 7) ☒ Claim(s) 3-7,9,11-13 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,794,330, granted to Distefano et al. (hereafter Distefano).

Distefano discloses, referring to figures 1-4, an electric contact probe assembly, comprising: a non-electroconductive support sheet (32) having a front and reverse sides and at least one through hole (42); an electroconductive patch (38, 40) attached to a part of the support sheet adjacent to the through hole; an electroconductive resilient probe member (57) having a base end attached to the patch and a free end projecting from the front side of the support sheet; and a circuit board placed over the reverse side of the support sheet and having a circuit layer incorporated therein and a terminal facing the reverse side of the support sheet; the support sheet being fixedly attached to the circuit board by an electroconductive bonding member which both physically and electrically connects the patch with the terminal (not shown, but described in col. 12, lines 15-20) [claims 1, 16], wherein the patch is attached to the front side of the support sheet so as to expose at least a part of the patch to the interior of the through hole [claim 8], wherein the electroconductive bonding member comprises a solder lump (see col. 12, lines 15-20) [claim 14].

Claims 1, 2, 5, 10, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,297,967, granted to Baumberger et al (hereafter (Baumberger)).

Baumberger discloses, referring to figure 10, an electric contact probe assembly, comprising: a non-electroconductive support sheet (51) having a front and reverse sides and at least one through hole; an electroconductive patch (55) attached to a part of the support sheet adjacent to the through hole; an electroconductive resilient probe member (61) having a base end attached to the patch and a free end projecting from the front side of the support sheet; and a circuit board (19) placed over the reverse side of the support sheet and having a circuit layer incorporated therein and a terminal (25) facing the reverse side of the support sheet; the support sheet being fixedly attached to the circuit board by an electroconductive bonding member (99) which both physically and electrically connects the patch with the terminal [claims 1, 16], wherein the electroconductive resilient probe member comprises a compression coil spring [claim 2], further comprising a housing layer (53) placed over the front side of the support sheet, the housing layer defining a holder hole through which a free end of the compression coil spring projects [claim 5].

Alternately, Baumberger discloses, referring to figure 10, an electric contact probe assembly, comprising: a non-electroconductive support sheet (53) having a front and reverse sides and at least one through hole; an electroconductive patch (55) attached to a part of the support sheet adjacent to the through hole; an electroconductive resilient probe member (61) having a base end attached to the patch and a free end projecting from the front side of the support sheet; and a circuit board

(19) placed over the reverse side of the support sheet and having a circuit layer incorporated therein and a terminal (25) facing the reverse side of the support sheet; the support sheet being fixedly attached to the circuit board by an electroconductive bonding member (99) which both physically and electrically connects the patch with the terminal [claims 1, 16], wherein the patch is attached to the reverse side of the support sheet so as to expose at least a part of the patch to the interior of the through hole [claim 10].

Allowable Subject Matter

Claims 3-7, 9, 11-13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 3 states the limitation "wherein the compression coil spring comprises a closely wound conical section at a free end thereof". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 4 states the limitation "wherein the compression coil spring comprises a coarsely wound section at a free end thereof which is adapted to fit over a solder ball which is desired to be contacted". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 6 states the limitation "wherein an end of the holder hole remote from the support sheet is provided with an internal flange which controls a projecting length of the free end of the compression coil spring". This limitation, in conjunction with the other claimed limitations

was neither found to be disclosed in, nor suggested by the prior art. Claim 7 states the limitation "wherein the electroconductive resilient probe member comprises a cantilever sheet spring". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 9 states the limitation "wherein the patch entirely covers the through hole, and is provided with a central opening". Claim 11 states the limitation "wherein the patch includes an axial projection which extends into the through hole". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 15 states the limitation "wherein the base end of the resilient probe member is attached to the patch by soldering". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,095,823 Banks,

US 6,474,997 Ochiai.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 703-306-5737. The examiner can normally be reached on Mon.-Th., 9AM - 6:30 PM and alt. Fri. 9AM-5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN
December 14, 2002



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